WHAT IS CLAIMED IS:

1. A method for determining the presence or absence of a target nucleic acid in a test sample comprising:

contacting a target nucleic acid comprising first and second adjacent regions with a piezoelectric biosensor comprising a microsensor having a surface comprising an immobilized probe nucleic acid which hybridizes to said first region of said test nucleic acid to form a hybridization complex, wherein said first region of said target nucleic acid is double stranded and said adjacent second region of said target nucleic acid is single stranded in said hybridization complex;

extending the probe nucleic acid in said hybridization complex using said second region in said test nucleic acid as template; and

measuring a parameter of said piezoelectric biosensor which provides an indication of whether or not said target nucleic acid is present in said test sample.

2. The method of claim 1 wherein extension of said probe nucleic acid is dependent upon base pair matches or mismatches with one or more opposing nucleotides in said first or said second region.

3. The method of claim 2 wherein said base pair match or mismatch is not the terminal nucleotide of said probe nucleic acid.

4. The method of claim 1 wherein said piezoelectric biosensor comprises a piezoelectric element and said parameter is resistance, current or voltage.

5. The method of claim 1 wherein said piezoelectric biosensor comprises a piezoelectric element and said microsensor undergoes a change in resonant

oscillation frequency or amplitude upon probe extension as measured by a charge in resistance, current or voltage of said piezoelectric element.

6. The method of claim 1 further comprising amplifying said target nucleic acid.

7. The method of claim 5 wherein said amplifying is by PCR or LCR and said amplification occurs simultaneously with said contacting.

8. The method of claim 3 wherein the presence of a base pair match or mismatch at said terminal nucleotide in said hybridization complex is indicative of the substitution, insertion or deletion of one or more nucleotides in said test nucleic acid as compared to said probe nucleic acid.

9. The method of claim 1 wherein the measurement of said parameter provides an indication of the concentration of said target nucleic acid in said test sample.

10. A devise for detecting the presence or absence of a target nucleic acid comprising:

a piezoelectric element;

a microsensor in mechanical communication with said piezoelectric element, said microsensor having a surface comprising an immobilized probe nucleic acid;

an oscillator in mechanical communication with said microsensor;

an oscillator controller in mechanical communication with said piezoelectric element;

a measurement device for measuring oscillation amplitude or resonance frequency of said microsensor in response to a parameter of said piezoelectric element.